

Notice of Allowability

Application No.

10/002,730

Examiner.

Mark Ruthkosky

Applicant(s)

LEBAN

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/13/2003.
2. ☒ The allowed claim(s) is/are 1-33.
3. ☒ The drawings filed on 29 October 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 10/29/01; 6/13/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 2/12/2003.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Mark Ruthkosky
Primary Patent Examiner
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Mark Ruthkosky 2/04

DETAILED ACTION

Information Disclosure Statement

The information disclosure statements filed 10/29/2001 and 6/13/2003 have been placed in the application file, and the information referred to therein has been considered as to the merits.

Drawings

The drawings filed on 10/29/2001 have been approved.

Allowable Subject Matter

Claims 1-33 are allowed.

The following is an examiner's statement of reasons for allowance: The instant claims are to a PEM fuel cell comprising a plurality of fuel cells with each fuel cell comprising first and second ribbed surfaces; an electrolyte disposed between the first and second ribbed surfaces; the first ribbed surface comprising an anode; the second ribbed surface comprising a cathode; and an enclosing layer affixed to a first edge of a plurality of first and second ribbed surfaces, thereby creating a chamber between the surfaces of alternating anodes and cathodes; and a connecting layer affixed to a second edge of the first and second ribbed surfaces, providing electrical conductivity between select anodes and cathodes.

The prior art does not teach a PEM fuel cell comprising a plurality of fuel cells having the arrangement described. In particular, the prior art does not teach an arrangement wherein an

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enclosing layer is affixed to a first edge of a plurality of first and second ribbed surfaces, thereby creating a chamber between the surfaces of alternating anodes and cathodes with a connecting layer affixed to a second edge of the first and second ribbed surfaces, providing electrical conductivity between select anodes and cathodes. This type of arrangement is shown in figure 1 wherein the alternating anodes and cathodes are connected on one edge to an enclosing layer and on the other edge to a connecting layer. The most pertinent prior art includes McLean (US 6,593,022) which teaches a PEM fuel cell comprising a plurality of fuel cells including first and second ribbed surfaces; an electrolyte disposed between the first and second ribbed surfaces; the first ribbed surface comprising an anode; the second ribbed surface comprising a cathode; and an enclosing layer affixed to a first edge of a plurality of first and second ribbed surfaces. The reference does not teach an arrangement wherein an enclosing layer affixed to a first edge of a plurality of first and second ribbed surfaces, thereby creating a chamber between the surfaces of alternating anodes and cathodes. In the prior art, the arrangement does not form a chamber between the surfaces of alternating anodes and cathodes, as the anodes and cathodes do not alternate. The chamber formed in the prior art does not include the enclosing layer affixed to a first edge of a plurality of the first and second ribbed surfaces. As the claimed arrangement is not taught in the prior art, the claims are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Examiner Correspondence

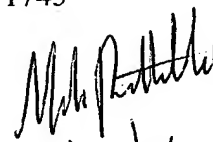
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free.)

Mark Ruthkosky

Primary Patent Examiner

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2/12/04